CLAIMS

1. A surface treatment agent comprising (1) a fluorine-containing polymer and (2) water and/or an organic solvent, characterized in that the fluorine-containing polymer comprises repeating units derived from a fluorine-containing compound of the formula:

$$CH_2=C(-X)-C(=O)-Y-[-(CH_2)_m-Z-]_p-(CH_2)_n-Rf \qquad (I)$$

wherein X is a hydrogen atom or a methyl group;

Y is -O- or -NH-;

Z is -S- or $-SO_2-$;

Rf is a fluoroalkyl group having 1 to 6 carbon atoms;

m is from 1 to 10, n is from 0 to 10, and p is 0 or 1.

2. The surface treatment agent according to claim 1, which is in the form of a solution, an emulsion or an aerosol.

3. A method of treating a substrate with the surface treatment agent according to claim 1.

4. The method according to claim 3, wherein the substrate is a textile, a masonry, a filter (for example, an electrostatic filter), a dust protective mask, a fuel cell, glass, paper, wood, leather, fur, asbestos, brick, cement, metal and oxide, ceramics, plastics, a coated surface or a

plaster.

5. A textile treated with the surface treatment agent according to claim 1.

6. A carpet treated with the surface treatment agent according to claim 1.

7. A fluorine-containing compound (a) of the formula:

$$CH_2=C(-X)-C(=O)-Y-[-(CH_2)_m-Z-]_p-(CH_2)_n-Rf \quad (I)$$

wherein X is a hydrogen atom or a methyl group;

Y is -O- or -NH-;

Z is -S-;

Rf is a fluoroalkyl group having 1 to 6 carbon atoms;

m is from 1 to 10, n is from 0 to 10, and p is 0 or 1;

provided that when p is 0, Y is -NH- and that when p is 1, Y is -O- and n is 0.

8. The fluorine-containing compound according to claim 7, wherein the carbon number of the fluoroalkyl group (Rf group) is from 1 to 4.

9. The fluorine-containing compound according to claim 7, wherein the fluoroalkyl group (Rf group) is a perfluoroalkyl group.

10. A fluorine-containing polymer comprising (A) repeating units derived from the fluorine-containing compound (a) according to claim 7.

11. The fluorine-containing polymer according to claim 10, further having:

(B) repeating units derived from (b) a monomer free from a fluorine atom, and

(C) optionally, repeating units derived from (c) a crosslinkable monomer,

in addition to the repeating units (A).

12. The fluorine-containing polymer according to claim 11, wherein the fluorine atom-free monomer (b) forming the repeating units (B) is acrylates of the general formula:

$CH_2=CA^1COOA^2$

wherein A^1 is a hydrogen atom or a methyl group, and

A^2 is a hydrocarbon group having 1 to 30 carbon atoms (particularly an alkyl group represented by C_nH_{2n+1} (n = 1 to 30)).

13. The fluorine-containing polymer according to claim 11, wherein the crosslinkable monomer (c) forming the repeating units (C) is a fluorine-free monomer having at least two

reactive groups and/or carbon-carbon double bonds.

14. The fluorine-containing polymer according to claim 11, wherein the amount of the fluorine atom-free monomer (b) is 0.1 to 50 parts by weight, and
the amount of the crosslinkable monomer (c) is at most 20 parts by weight,
based on 100 parts by weight of the fluorine-containing compound (a).